REMARKS

The Examiner is thanked for the examination of the application. However, in view of the remarks that follow, the Examiner is respectfully requested to reconsider and withdraw the rejections.

The Examiner is respectfully requested to confirm that the Supplemental Amendment filed on December 9, 2008 has been entered.

Art Rejections:

Claims 1, 4, 5, 8, and 9 have been rejected under 35 USC 103(a) as being unpatentable over USP 6,952,492, hereinafter *Tanaka*, in view of EP 0643293, hereinafter *Toshiba*.

Claims 1, 5, 8, and 9 recite that the master pattern includes four corner pattern portions and four side pattern portions. Each of the four corner pattern portions (represented in the preferred embodiments as 17a-17d) has two perpendicular edges defining the respective corner portion. And, each of the four side pattern portions (represented in the preferred embodiments as 17e-17h) has a straight edge portion defining a vertical edge or a horizontal edge. However, the present invention is not limited to the preferred disclosed embodiments.

The Examiner relies upon *Tanaka* for an alleged teaching of classifying a master pattern into standard pattern portions involving four corner pattern portions each of which is applied to a respective corner portion of the inspection area and has two perpendicular edges defining the respective corner portion and an L-shaped outer area surrounding the perpendicular edges, and a central pattern portion without having an edge portion of the inspection area;

Tanaka does not disclose a combination of the four corner pattern portions and the four side pattern portions as in the present invention. The Examiner relies upon *Toshiba* to allegedly teach using four side patterns to thus teach a total of nine standard pattern portions when combined with *Tanaka*. The Examiner asserts that it would have been obvious to modify *Tanaka* to include edge detection (as allegedly taught by *Toshiba*) to allow for a more precise matching between the master pattern and an inspection area.

However, Applicants submit that *Toshiba,* when considered as a whole, actually teaches away from the claimed invention. A reference "teaches away" from a claimed invention when a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path that was taken by the applicant (see *In re Kahn*, 441 F.3d 977 (Fed. Cir. 2006); *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299 (Fed. Cir. 2006)). "When the prior art teaches away from combining certain known elements, discovery of successful means of combining them is more likely to be nonobvious." *KSR International Co. v. Teleflex Inc*, 82 USPQ2d 1385, 1395 (2007)).

The *Toshiba* reference teaches away from what the Examiner alleges that it teaches. In other words, the Examiner appears to rely on *Toshiba* for its teaching of using both the side edge patterns and the corner patterns, relying on the "prior art" sections of *Toshiba*. The pattern comparisons illustrated in Figures 9 and 10 of *Toshiba* appear to be used for the Direct Comparison Circuit 10 of the known device. However, *Toshiba* states that such direct comparison has problems if the patterns are not aligned properly. See column 5, lines 25 - 31. It is significant that in the "inventive" embodiment of *Toshiba* (Figure 11), there is no Direct Comparison Circuit

10. Thus, when reading *Toshiba* as a whole, it teaches away from the use of patterns to detect defects. Instead, *Toshiba* relies on algorithms to detect defects based on the four directions illustrated in Figure 12.

Furthermore, the Office Action relies on *Toshiba* for allegedly teaching "edge detection". However, "edge detection" is not what is missing from *Tanaka*. What the prior art does not teach, either singly or in combination, is the concept of using ***both*** the corner pattern portions and the side pattern portions so that the inspection can take place efficiently, and without the risk of the side pattern portions running past the corners and giving erroneous rejections.

As carefully explained in paragraph [0007] of the published application, the present invention is intended to overcome a problem used when inspections were made using only straight edge portions. If the straight edge portions extended beyond the corner of the view area of the chip, an erroneous rejection was made. As explained in paragraph [0013] of the published application, because the master pattern includes corner portions as well as straight portions, the straight portions can be used repeatedly across the straight edges of the chip until it reaches the corner, and the corner portions are used to inspect the corners of the chip. As a result, the straight portions cannot erroneously extend beyond the corners of the chips and give false rejections.

By including each of the four corner pattern portions and each of the four side pattern portions of the master pattern as described above, the nine standard pattern portions of the master pattern can be easily matched with the inspection view areas, respectively, without requiring severe positional alignment.

See, for example, paragraph [0039] of the published application, which states:

> To the contrary, according to the present invention of this application, since the information on the edge shapes and the exterior areas are correspondingly contained in the standard pattern portions 17a to 17h on the peripheral portion excluding the central pattern portion 17i, no severe positional alignment needs not be done unlike in the prior art. Therefore, the peripheral standard pattern portions 17a to 17h can be positionally aligned at a relatively large allowable error, that is, with the same allowable error as in the case of the central pattern portion 17i, so that erroneous judgment due to the error in this alignment is avoided. As a result, the occurrence of the erroneous judgment due to the error in arrangement of the standard pattern portion 17a to 17h constituting the master pattern 17 is avoided, and the effective surface inspection can be performed.

Accordingly, it is the combination of ***both*** the corner pattern portions and the side pattern portions that enables the present invention to work both efficiently and accurately, minimizing false or erroneous rejections.

Therefore, Applicants submit that the present invention significantly differs from the technology described in *Tanaka* and *Toshiba* in the structure and technical effect, and is not easily made based on the technical matters set forth in the applied art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejections.

In the event that there are any questions concerning this Amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: October 19, 2009

By: /WCRowland/
William C. Rowland
Registration No. 30888

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620